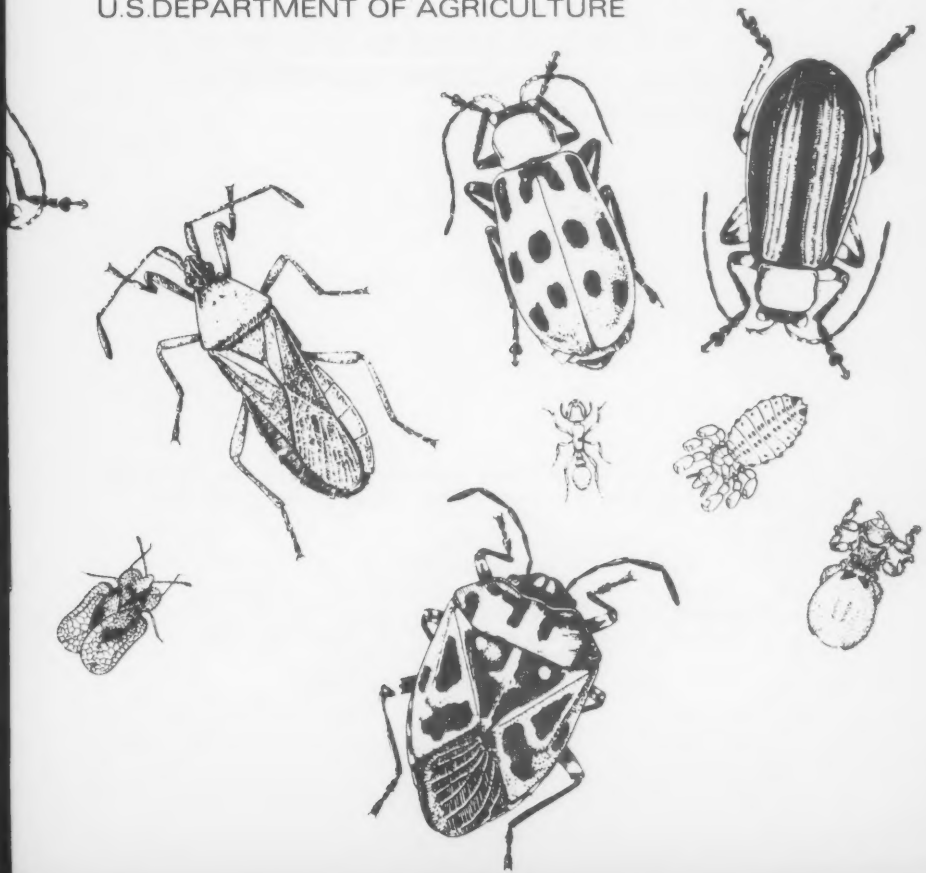
VOL. 25 NO. 35 August 29, 1975

Cooperative Economic Insect Report

Issued by
PLANT PROTECTION AND QUARANTINE PROGRAMS
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
U.S.DEPARTMENT OF AGRICULTURE



ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE PROGRAMS
NEW PEST DETECTION AND SURVEY STAFF

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Service serves as a clearing house and does not assume responsibility for accuracy of the material.

All reports and inquiries pertaining to this release, including the mailing list, should be sent to:

CEIR
New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
United States Department of Agriculture
Federal Center Building
Hyattsville, Maryland 20782

Volume 25 August 29, 1975 Number 35

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

CORN EARWORM heavy on corn in Kansas and a problem on soybeans in South Carolina and North Carolina. (p. 719).

BOLL WEEVIL punctured up to 80 percent of squares in Oklahoma, Alabama, and Tennessee. (p. 723).

Clinical cases of western equine encephalomyelitis increased in Minnesota. (p. 728).

Detection

One APHID each, found for the first time in Utah (p. 722) and Idaho. (p. 728).

For new county and island records, see page 725.

Reports in this issue are for the week ending August 22 unless otherwise indicated.

CONTENTS

Special Insects of Regional Significance.....719

Insects Affecting

Corn, Sorghum, Sugarcane...720
Small Grains.....721
Turf, Pastures, Rangeland..722
Forage Legumes.....722
Soybeans.....722
Peanuts.....723
Cotton.....723
Tobacco.....724
Miscellaneous Field Crops..724
Beans and Peas.....724
Cole Crops.....725
General Vegetables.....725
Deciduous Fruits and Nuts..726
Ornamentals.....726
Forest and Shade Trees.....726
Man and Animals.....727
Stored Products.....728

Detection.....725
Federal and State Plant Protection Programs.....728
Hawaii Insect Report.....729
Light Trap Collections.....730

WEATHER OF THE WEEK ENDING AUGUST 24

Reprinted from Weekly Weather and Crop Bulletin supplied by National Weather Service, NOAA.

HIGHLIGHTS: Rains during week made little progress in the hot dry central Plains where above normal temperatures persisted. Showers and thunderstorms focused on the Great Lakes and Mississippi Valley regions and stirred up some severe weather in parts of the Midwest. Unseasonably cool temperatures along the Canadian border and Pacific Northwest contrasted the hot humid conditions in the mid-Atlantic Coast States.

PRECIPITATION: Frontal systems that turned up at the beginning of the week delivered rains across much of the Nation, particularly the western half. Moving inland from the Pacific on Monday, one front dumped unusually heavy rains from Washington to central California and sprinkled showers on parts of Montana, Idaho, and Nevada. Another system took over from the Plains to the Atlantic coast carrying thundershowers to North Dakota, eastern Colorado, and portions of Kansas and Nebraska. Meanwhile, scattered activity occurred in the middle and lower Mississippi Valley and Southeast. To the west, fair skies held on from the southern Plateau into the southern Plains and from the Upper Mississippi Valley to north Atlantic coast. Tuesday, scattered thundershowers ranged east from the Mississippi Valley west into the Dakotas. Heavy rains that sparked local floods in northwest Iowa, southwest Kansas, and southwest Arkansas diminished later in the day. Limited precipitation was measured around the country on Wednesday. Some thundershowers rumbled across the upper Mississippi Valley into the northern Great Lakes region, others were scattered along the gulf coast f om Florida to Louisiana and through the southern portions of the Plateau and Rockies. Responsible for much of moisture total, heavy storms brought flooding and high winds to Nevada where damage was extensive.

Weather of the week continued on page 732.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

ARMYWORM (Pseudaletia unipuncta) - MINNESOTA - Light trap catches increased again; possibility of rare second generation. (Minn. Pest Rpt.).

BEET LEAFHOPPER (Circulifer tenellus) - UTAH - Tomato losses due to curly top disease heavy in Beaver County, moderate in Salt Lake and Davis Counties, and 90 percent of crop in Washington County. (Esplin et al.).

CORN EARWORM (Heliothis zea) - COLORADO - Larvae light in field corn in northeastern area. Generally less than one per 100 ears. (Hantsbarger). OKLAHOMA - Light in sorghum heads in most southwest area fields. Scattered light infestations, up to 2 per 10 heads, in Canadian, Grady, Stephens, Love, Murray, and Garvin Counties. Mostly small larvae up to 7 per row foot on Marshall County peanuts. Averaged 3 per 10 sweeps of Canadian County alfalfa. Light numbers damaged mung bean pods in Kiowa, Greer, and Jackson Counties. (Okla. Coop. Sur.). KANSAS - Larvae heavy, 1-2 per ear on 95 percent of milk-stage corn in Kiowa County. Many eggs on upper leaf surfaces. Larvae heavy in whorls of pretassel corn in Stafford County. Infested 20-50 percent of ears in Finney, Grant, Kearny, and Haskell Counties. Larvae declined in heads of sorghum in southeast district; very few left. (Bell).

ALABAMA - Corn earworm and Spodoptera frugiperda (fall armyworm) destroyed 125 acres of late corn in Crenshaw County. Fall armyworm predominates 10:1. Destroyed 10-50 of late-planted corn in Chambers and Clay Counties. Few larvae feeding on pods in many soybean fields in Geneva and Monroe Counties. Very heavy adult flight in Geneva County; lighter in Monroe County. (Smith et al.). TENNESSEE - Larvae 0-1 per linear foot of soybeans in Hardin, Wayne, Lewis, Maury, Marshall, and Bedford Counties. Larvae in only one percent of fields. (Swindol et al.).

SOUTH CAROLINA - Corn earworm larvae up to 10 per foot of row, soybean foliar loss up to 30 percent, week ending August 15. (Griffin). NORTH CAROLINA - More soybean fields near threshold level August 18-21 in central and southern Coastal Plain counties. About 30 percent of 25 fields with small to medium pods in Montgomery, Anson, Sampson, and Wilson Counties at or above threshold; larvae averaged 1.7 per foot. Fields near threshold increased in Northampton and Halifax Counties. Low percentage of fields in Washington and Hyde Counties at threshold. (Van Duyn et al.).

VIRGINIA - Early instars of corn earworm hatched in Isle of Wight County. Averaged 15 per 30 row feet in 5 fields of late-planted soybeans and 80 per 30 row feet in one field. Larvae light, 5 per 30 row feet, in early planted soybeans. Moths peaked at 317 in City of Suffolk light trap August 16. (Allen). DELAWARE - Some larvae infested lima beans in several areas. (Burbutis).

CORN LEAF APHID (Rhopalosiphum maidis) - UTAH - Some conspicuous infestations of spring barley at Abraham, Millard County. (Chapman). IOWA - Continued to cause upper leaves of corn to turn brown in drought-stressed fields in Butler, Black Hawk, Grundy, and Kossuth Counties week ending August 15. (DeWitt). WISCONSIN - Heavy in corn as far north as Chippewa County. (Wis. Ins. Sur.).

GREENBUG (Schizaphis graminum) - UTAH - Heavy in many milo fields in Washington County. (Huber). TEXAS - Moderate on sorghum in San Angelo area; heavy in Rolling Plains. Some treatment continued in Lubbock and Plainview areas. (McWhorter et al.). OKLAHOMA - Scattered heavy infestations still present on preboot sorghum in southwest counties and in Jefferson County. Up to 1,000 per plant with 10 percent parasitism in Jefferson County field. Only scattered light infestations remain in Texas County. (Okla. Coop. Sur.). KANSAS - Nearly all infestations on sorghum wiped out by Lysiphlebus testaceipes (a braconid wasp) with help from lady beetles. Many greenbugs still in few fields in Scott and Wichita Counties where wasp increasing rapidly. (Bell). WISCONSIN - Up to 25 greenbugs per plant in Richland County grain sorghum field. Populations reduced by parasitism. (Wis. Ins. Sur.).

POTATO LEAFHOPPER (Empoasca fabae) - INDIANA - Continued problem on alfalfa. Complex of this species, Acyrthosiphon pisum (pea aphid), and in some fields, Plathypena scabra (green cloverworm), required controls in northern area fields not ready for harvest. (Edwards).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Averaged 70 per 10 sweeps of Canadian County alfalfa. (Okla. Coop. Sur.). NORTH DAKOTA - Ranged 20-130 (averaged 83) per 100 sweeps of alfalfa in Morton and Sioux Counties July 15, 1975. Collected and determined by W.J. Brandvik. These are new county records. (Brandvik).

TOBACCO HORNWORM (Manduca sexta) - NORTH CAROLINA - Harvest completed in 35-40 percent of tobacco fields in Lenoir County. Of 70 late-transplanted fields, 17 at or above threshold. Harvest completed in 50 percent of Bladen County fields. Of 140 later fields, 14 at or above threshold. Averaged 15 per 50 plants in 2 or 3 fields. (Harper et al.).

TOMATO HORNWORM (Manduca quinquemaculata) - INDIANA - Larvae, 10-15 per 100 square feet, heavily damaged tomatoes in 3 commercial fields in Jackson County. (York).

CORN, SORGHUM, SUGARCANE

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - TENNESSEE - Damaged late-planted corn in southern counties of central area. Most corn will be used for silage. (Gordon, Bruer). KENTUCKY - Average percentage infested by county: Graves 11, Henderson 4.4, Union 7.6, Daviess 5.2, Muhlenberg 3.6, Webster 5.6, McLean 4.8, Ohio 0.8, Hopkins 10.8, Christian 7.6, Todd 5.2, Logan 4.4, Simpson 10.0, and Warren 9.2. (Barnett). KANSAS - Second-generation larvae heavy in some corn in south-central counties. Average percentage infested by county: Stafford 80-100, Pawnee 72, Edwards 88, Kiowa 96, Pratt 55, and Rice 10. Moth flights continued with small decline in affected areas. Percent of plants with nonhatched eggs by county: Stafford 8-33, Edwards 20, Kiowa 50. All stages of second-generation larvae in all fields; fully grown larvae heaviest in Stafford, Pawnee, and Edwards Counties. (Bell).

EUROPEAN CORN BORER (Ostrinia nubilalis) - KANSAS - Percent of corn infested by county: Stafford 24, Pawnee 52, Edwards 16, Kiowa 12, Pratt 30, and Rice 25. Second-generation egg laying completed. Larvae from second instars to fully grown. Moths declined. (Bell). WISCONSIN - Activity and egg laying continued intense; eggs heavy on beans and sweet corn. Egg masses on about half of corn in eastern Grant County. Second instars in tassels in Waukesha County. Canners applied controls for 7 days. (Wis. Ins. Sur.).

FALL ARMYWORM (Spodoptera frugiperda) - NORTH CAROLINA - Heavy on corn for several weeks, particularly in southern Coastal Plain. Sorghum, 60 acres, stripped near Castle Hayne, New Hanover County. (Baker). MISSOURI - Light to moderate on east-central area late corn. Mostly second and third instars on 6-13 percent of plants. Larvae light, 4-31 per head, on late sorghum. (Munson). KANSAS - Larvae on about half of ears of milk-stage corn in Kiowa County; few in ears of early corn and whorls of late corn in Stafford County. Larvae in 30 percent of whorls of late sorghum in Douglas County. (Bell). WISCONSIN - Second and third instars in Waukesha County corn. Infested up to 28 percent of some sweet corn. Feeding mostly confined to tassels. (Wis. Ins. Sur.).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - COLORADO - Prevalent in many cornfields in northeastern area, larvae up to 80 per 100 ears in untreated fields. About 30,000 acres treated. (Hantsbarger).

CORN ROOTWORMS (Diabrotica spp.) - UTAH - D. virgifera (western corn rootworm) more of problem from Logan north in Cache County and at West Jordan, Salt Lake County. (Burningham, Roberts). SOUTH DAKOTA - Diabrotica spp. damaged corn following soybeans in Union County. (DeSmet). WISCONSIN - Diabrotica spp. adults numerous, moved into younger corn. Averaged 7+ per plant on 25 plants, up to 15 per plant on some in Grant County field. Numerous around lights and on large variety of flowering plants, such as squash and roses. D. virgifera females finished egg laying, some fields with 41 eggs per pint of soil; adult emergence completed. (Wis. Ins. Sur.). INDIANA - D. virgifera adults collected on corn in Delaware and Randolph Counties by J. Thieme August 9, 1975. Determined by J. Thieme; confirmed by A. Provonsha. These are new county records. (Meyer).

SORGHUM MIDGE (Contarinia sorghicola) - TEXAS - Heavy in blooming sorghum in Rolling Plains. Moderate to heavy in San Angelo area. (Boring, McWhorter). OKLAHOMA - Percentage of damaged grain sorghum by county: Grady 65 and 2 percent, Love 20, Murray 5, and Garvin-one. Recently emerged adults in several of these fields. Counts moderate to heavy in Washita County. (Okla. Coop. Sur.).

SMALL GRAINS

HESSIAN FLY (Mayetiola destructor) - ILLINOIS - Light and non-economic this year. Heaviest in Clinton County with 7.2 puparia per 100 wheat plants. (Ill. Ins. Rpt.).

ENGLISH GRAIN APHID (Macrosiphum avenae) - MONTANA - Counts of 25 per head on late-seeded spring wheat in large area of Teton County. (Pratt).

TURF, PASTURES, RANGELAND

RHODESGRASS SCALE (Antonina graminis) - CALIFORNIA - Infested Johnson grass at Calexico, Imperial County. (Cal. Coop. Rpt.).

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) - NEW MEXICO - Up to 27 per 25 sweeps of alfalfa in South Valley area, Bernalillo County. (N.M. Coop. Rpt.). NORTH DAKOTA - Adults one per 200 sweeps of alfalfa in rural area of Dickey County July 21, 1975. Collected by C.G. Scholl. Determined by R.L. Post. This is a new county record. (Scholl). MINNESOTA - Taken from light trap at Duluth, St. Louis County, by Wuotila on August 18, 1975. Determined by B. Ford. This is a new county record. (Minn. Pest Rpt.).

AN APHID (Acyrthosiphon sp., caraganae group) - UTAH - Specimens collected from alfalfa at St. George, Washington County, by D. Huber May 11, 1975. Determined by V.F. Eastop. (Roberts, Knowlton). This is a new State record. (PPQ).

PEA APHID (Acyrthosiphon pisum) - OKLAHOMA - Averaged 75 per 10 sweeps of alfalfa checked in Canadian County. (Okla. Coop. Sur.). NORTH DAKOTA - Up to 5,000 per 100 sweeps in second-cutting alfalfa. Averaged 3,500 per 100 sweeps in Traill and Griggs Counties. (Scholl).

THREECORNERED ALFALFA HOPPER (Spissistilus festinus) - ARIZONA - Swarms reported on alfalfa in Safford Valley, Graham County. Worst alfalfa infestation known in area week ending August 15. (Ariz. Coop. Sur.).

SOYBEANS

GREEN CLOVERWORM (Plathypena scabra) - SOUTH CAROLINA - Larvae in soybeans statewide week ending August 15; damage still below economic threshold in most areas. Averaged 2 per foot of row. Foliar loss averaged 3-8 percent. (Griffin). INDIANA - Larvae defoliated 20 percent of soybean field in De Kalb County. (Edwards). IOWA - Larvae, mostly third to fifth instars, 13 per row foot in northern Kossuth County. Soybeans in pod-fill stage with 3-5 percent defoliation. Treatment began. Counts fewer south of Kossuth County; means ranged 1.5-7.0 larvae per row foot. (Iowa Ins. Sur.).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - ALABAMA - Second-generation larvae light to heavy 1-10 per 6 feet of row in 50,000 acres of soybeans in Geneva and Monroe Counties. Foliar damage 15-30 percent in some fields. Several hundred acres treated in Crenshaw County due to excessive foliar feeding. Larvae generally light in all peanuts surveyed in Geneva County. Larvae 5-25 per 1.5 feet of row with 15-25 percent leaf loss. Adult flights general in area; larval increase expected until harvest. (Bond et al.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - TENNESSEE - About 500 acres of soybeans treated. Foliar feeding in all treated fields, most acreage treated before economic threshold reached. (Cagle).

INDIANA - Mexican bean beetle defoliated 35 percent, up to 100 percent in some parts, of some fields in Clay and Owen Counties. Damage usually in small fields in otherwise wooded areas, but some larger fields severely damaged. Similar damage in Bartholomew County field. (Hallman).

PEANUTS

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - ALABAMA - Larvae scarce in all Geneva County peanuts surveyed. Very wet conditions unfavorable. (Reynolds et al.). TEXAS - Light on peanuts in Rolling Plains, increased in Comanche County. (Boring, Curtus). OKLAHOMA - Third-generation larvae infested average of 32 percent of Marshall County peanuts. (Okla. Coop. Sur.).

REDNECKED PEANUTWORM (Stegasta bosqueella) - OKLAHOMA - Up to 5 per terminal and 18 per row foot on Marshall County peanuts. Infested terminals averaged 58 percent. (Okla. Coop. Sur.).

COTTON

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Decreased on cotton in south-central area. Light to heavy in Rolling Plains area. Heavy in San Angelo area. (Cole et al.). OKLAHOMA - Punctured 60-80 percent of squares in some fields in southwest counties. Fresh punctures ranged 10-20 percent in treated fields. Averaged 11 percent in Grady County and one percent in Payne County. (Okla. Coop. Sur.). LOUISIANA - Increased in many cotton fields in northeast area. Blooms full of weevils in some fields. (Tynes). ALABAMA - Still heavy statewide, ranged 2-90 (averages of 8-25) percent. Continued to emerge from old squares at higher rate than in most years due to heavy egg laying when growers unable to properly apply controls. (Lowery et al.).

BOLLWORMS (Heliothis spp.) - TEXAS - H. zea (bollworm) damage moderate to heavy in Rolling Plains. Counts moderate in Pecos and Reeves Counties and south-central area. (Boring et al.). OKLAHOMA - H. zea larvae light in most fields of early planted cotton in southwest counties but up to 20 per 100 terminals in few fields. Eggs 20-30 per 100 terminals. Percentage of damaged squares averaged by county: Payne 4, Grady 15, and Jackson 5. Larvae from treated field in Jackson County: 6 H. zea and 5 H. virescens (tobacco budworm). (Okla. Coop. Sur.).

LOUISIANA - H. virescens activity increased in upper Red River Valley week of August 15. Up to 150 eggs per 100 cotton plant terminals on August 14 in Red River Valley. Larvae from field in Red River Parish over 50 percent tobacco budworms. Emerging and active August 13 in central area. Mostly H. zea moths in Rapides Parish. Heaviest egg count in northeast area ranged 10-20 per 100 plant terminals. (Tynes).

ARKANSAS - Total of 219 H. zea and 135 H. virescens taken in Ashley, Jefferson, and Lincoln Counties August 8-19. (Wall, Burleigh). TENNESSEE - Heliothis spp. continued heavy damage in many fields in southern tier of counties in western area. General in infested fields but spotty areawide. Larvae 0-30 per 100 terminals in Crockett County. Up to 22 per 100 terminals in untreated fields in Franklin and Lincoln Counties. Controls effective when properly applied. (Patrick et al.). NORTH CAROLINA -

Boll damage by Heliothis zea and H. virescens ranged 5-10 percent statewide. Up to 60 percent in some fields treated off schedule. Where controls difficult, H. virescens 50+ percent of population. (Whorley). GEORGIA - General Heliothis spp. increase statewide especially where controls interrupted. Eggs up to 48, larvae 0-16 (usually 3-4) per 100 terminals in southern areas week ending August 16. (Womack).

TOBACCO

BUDWORMS (Heliothis spp.) - TENNESSEE - All untopped fields at or above control levels. Larvae ranged 1,400-2,400 per acre. (Gregory).

HORNWORMS (Manduca spp.) - TENNESSEE - Larvae ranged 130-800 per acre. All untopped fields at or above control levels. (Gregory).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - KENTUCKY - Very heavy on tobacco in central area. (Barnett, Thurston).

GREEN PEACH APHID (Myzus persicae) - KENTUCKY - Continued increase, especially on susceptible tobacco varieties in central areas. (Barnett).

MISCELLANEOUS FIELD CROPS

SUNFLOWER MOTH (Homoeosoma electellum) - TEXAS - Damaged sunflowers in Lubbock area; light to heavy in Pecos Valley area. (McIntyre, Bagley). NORTH DAKOTA - Larvae infested trace to 100 percent of plants in Cass, Grand Forks, Griggs, Steele, Traill, and Walsh Counties. (Scholl).

BANDED SUNFLOWER MOTH (Phalonia hospes) - NORTH DAKOTA - Larvae ranged up to 58 per sunflower head in Cass, Grand Forks, Griggs, Steele, Traill, and Walsh Counties. (Scholl).

CARROT BEETLE (Bothynus gibbosus) - TEXAS - Light trap catches increased in northern area. (McIntyre). OKLAHOMA - Light trap counts by county: Tillman 5,250 and Greer 2,625. (Okla. Coop. Sur.).

BEANS AND PEAS

MEXICAN BEAN BEETLE (Epilachna varivestis) - UTAH - Continued problem on untreated and poorly treated bean patches in Cache, Box Elder, and Salt Lake Counties and serious problem in Davis and Salt Lake County beans. (Knowlton, Burningham). MISSOURI - Moderate to heavy on planting of green and lima beans in east-central area. (Munson). INDIANA - Averaged more than one lesion per snap bean pod in 45 acres. Unsuitable for commercial canning in Jackson County. (York).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - NORTH CAROLINA - Larvae extensively damaged 50+ percent of plants on 50 acres of 6-inch snap beans. Dry conditions favored infestations, especially on seedlings. Infested all varieties of beans, peas, and peanuts. (Fleming, Hunt).

EUROPEAN CORN BORER (Ostrinia nubilalis) - WISCONSIN - Field of snap beans in Waushara County with 4 egg masses per 5 feet of row indicated critical control situation. (Wis. Ins. Sur.).

COLE CROPS

IMPORTED CABBAGEWORM (Pieris rapae) - WISCONSIN - Larvae increased up to 10 per cauliflower head in Outagamie County; some nearly full grown. Controls continued on commercial cabbage in Columbia, Racine, Kenosha, and Outagamie Counties. Eggs 75+ per leaf in garden planting of horseradish. (Wis. Ins. Sur.).

CABBAGE LOOPER (Trichoplusia ni) - WISCONSIN - Larvae 2 or less per treated plant in Outagamie, Columbia, Racine, and Kenosha Counties. (Wis. Ins. Sur.).

GENERAL VEGETABLES

EUROPEAN CORN BORER (Ostrinia nubilalis) - DELAWARE - Adults averaged about 20 per night in Sussex County blacklight trap collections. Larvae average 30 percent in untreated sweet peppers in northwestern Sussex County; egg masses common. (Burbutis).

DETECTION

New State Records - AN APHID (Acyrthosiphon sp., caraganae group) - UTAH - Washington County. (p. 722). AN APHID (Dysaphis foenicula) - IDAHO - Nez Perce County. (p. 728).

New County and Island Records

A WEEVIL (Cleonus piger) - MICHIGAN - One specimen taken on grass at grain handling facility in Elmwood Township, Tuscola County. Collected by D. Stout August 11, 1975. Determined by R.F. Ruppel. (Hanna).

ALFALFA WEEVIL (Hypera postica) NORTH DAKOTA - Dickey. MINNESOTA - St. Louis (p. 722). CRAPEMYRTLE APHID (Tinocallis kahawaluokalani) CALIFORNIA - San Bernardino (p. 727). FACE FLY (Musca autumnalis) ARKANSAS - Woodruff, St. Francis, Lee, Lonoke, Prairie. TENNESSEE - Marshall, Bedford. (p. 727). MIMOSA WEBWORM (Homadaula anisocentra) ALABAMA - Lauderdale. OKLAHOMA - Kingfisher, Stephens (p. 727). SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) OREGON - Wallowa (p. 726). SPOTTED ALFALFA APHID (Therioaphis maculata) NORTH DAKOTA - Morton, Sioux (p. 720). SPRUCE BUD SCALE (Physokermes piceae) WASHINGTON - Kittitas (p. 726). SPRUCE NEEDLEMINER (Taniva albolineana) CALIFORNIA - Siskiyou (p. 726). A TREEHOPPER (Antianthe expansa) HAWAII - Maui (p. 729). WESTERN CORN ROOTWORM (Diabrotica virgifera) INDIANA - Delaware, Randolph. (p. 721).

DECIDUOUS FRUITS AND NUTS

CODLING MOTH (Laspeyresia pomonella) - OKLAHOMA - Larvae moderate to heavy in apples checked in Osage County. (Okla. Coop. Sur.). WASHINGTON - Pheromone trap catches for north-central areas week ending August 16: Okanogan County - Oroville and Tonasket 0-2, Brewster and Pateros 0-5; Chelan County - Chelan and Manson 0-13, greater Wenatchee 1-8, East Wenatchee 0-13; Douglas County - Rock Island 0-2. (Rushmore).

A TORTRICID MOTH (Platynota flavedana) - NEW YORK - Second-brood flight started in Ulster County August 14. Damage throughout Ulster County orchards. Phosphates commonly used may not be effective against larvae. (Weires).

GREEN JUNE BEETLE (Cotinis nitida) - OKLAHOMA - Heavy feeding on ripe peaches in Jackson and Comanche Counties. (Okla. Coop. Sur.).

APPLE MAGGOT (Rhagoletis pomonella) - MINNESOTA - Trap counts, declined, by county: Brown 15 and 3, Faribault 38, Hennepin 10, and St. Louis 3. Cover sprays still necessary. (Minn. Pest Rpt.).

PECAN WEEVIL (Curculio caryae) - TEXAS - Light on pecans in Rolling Plains; light to moderate in San Angelo area. (Boring, McWhorter). OKLAHOMA - Adults heavily emerged in southwest counties. Light in Garvin and Kay Counties. Some orchards treated in south-central counties. (Okla. Coop. Sur.).

BLACKMARGINED APHID (Monellia costalis) - OKLAHOMA - Continued heavy on pecans in many areas. (Okla. Coop. Sur.).

ORNAMENTALS

EUROPEAN EARWIG (Forficula auricularia) - UTAH - Very heavy around homes and gardens, taken into homes on flowers in Cache, Weber, and Salt Lake Counties. (Knowlton).

FOREST AND SHADE TREES

SPRUCE NEEDLEMINER (Taniva albolineana) - CALIFORNIA - Collected on blue spruce at Tulelake, Siskiyou County, by T. Haig and J. Schieber August 4, 1975. Determined by T. Eichlin. This is a new county record. (Cal. Coop. Rpt.).

SPRUCE BUD SCALE (Physokermes piceae) - WASHINGTON - Taken at Thorp, Kittitas County, July 7, 1975. Moderate to heavy on spruce at Ellensburg July 15. Collected by J. Kropf. Determined by L. Campbell. This is a new county record. (Harwood).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - OREGON - One specimen taken on multilure trap at Enterprise, Wallowa County, July 16 to August 12. Collected and determined by R. L. Penrose. This is a new county record. (Penrose, Brown).

LARGER ELM LEAF BEETLE (Monocesta coryli) - WEST VIRGINIA - Larval damage heavy to elm, basswood, and honeylocust in Hampshire County. Moderately defoliated elms in Grant County. (Miller).

LOCUST BORER (Megacyllene robiniae) - UTAH - Seriously damaged black locust trees in Salt Lake and Davis Counties. (Burningham).

MIMOSA WEBWORM (Homadaula anisocentra) - ALABAMA - Larvae and pupae heavy, taken on mimosa trees at Florence, Lauderdale County, August 15, 1975. Collected by G.C. Cain and D.L. Wilson. Determined by H.F. McQueen. This is a new county record. (McQueen). OKLAHOMA - Scattered light to moderate on mimosa at Kingfisher, Kingfisher County, August 18. Scattered light infestations at Duncan, Stephens County, August 20. Collected and determined by D.C. Arnold. These are new county records. (Okla. Coop. Sur.).

FALL WEBWORM (Hyphantria cunea) - TENNESSEE - Heavy in spots in many central areas. Larvae feeding mainly on hickory, walnut, persimmon, and pecan trees. (Gordon, Bruer). INDIANA - Heavy east and west of La Porte County along U.S. Highway 30. (Schuder).

MAPLE LEAFCUTTER (Paraclemensia acerifoliella) - MICHIGAN - Damaged several hundred acres of mature Benzie County sugar maples; severe defoliation can result, no chemical control available to date. (Norman).

CRAPEMYRTLE APHID (Tinocallis kahawaluokalani) - CALIFORNIA - Nymph and adults collected on crapemyrtle trees at San Bernardino, San Bernardino County, by R. Camblin July 16, 1975. Determined by T. Kono. This is a new county record and apparently first record south of Tehachapi Mountains. (Cal. Coop. Rpt.).

MAN AND ANIMALS

HORN FLY (Haematobia irritans) - TEXAS - Moderate to heavy on cattle, sheep, and goats in San Angelo area. (McWhorter). OKLAHOMA - Averages per head in Payne County: Cows 700, yearlings 750, and bulls 2,500. (Okla. Coop. Sur.). INDIANA - Lighter, 5-7 per animal in Tippecanoe County cattle herd. (Dobson). WISCONSIN - Moderately annoyed Polk County cattle. (Wis. Ins. Sur.).

FACE FLY (Musca autumnalis) - UTAH - Numerous on horses and cattle at Logan, Cache County. (Knowlton, Roberts). OKLAHOMA - Heavy on cattle in some Payne County areas. (Okla. Coop. Sur.). ARKANSAS - Collected from beef cattle by W.P. Boyer at following locations: Augusta, Woodruff County, August 18; Forrest City, St. Francis County, August 19; Marianna, Lee County, August 20; Lonoke, Lonoke County, August 21; De Valls Bluff, Prairie County, August 21. All determined by E.P. Rouse. These are new county records. (Boyer). TENNESSEE - Taken on cattle in Marshall and Bedford Counties August 21, 1975. Collected and determined by C.D. Gordon. These are new county records. (Gordon, Bruer). IOWA - Up to 50 per head on Story County cattle week ending August 15. (DeWitt). WISCONSIN - Annoyed cattle in Fond du Lac and Polk Counties. (Wis. Ins. Sur.). INDIANA - About 200 per animal on Tippecanoe County cattle herd. (Dobson).

STABLE FLY (Stomoxys calcitrans) - OKLAHOMA - Averaged 3 per head on dairy cattle checked in Payne County. (Okla. Coop. Sur.). WISCONSIN - Severely annoyed Polk County dairy cattle. (Wis. Ins. Sur.).

MOSQUITOES - UTAH - Annoyance continued generally at Logan, Benson, Smithfield, and Lewiston, Cache County. Annoyance decreased at Deseret, Delta, and Abraham, Millard County. Especially annoying east of Beaver, Beaver County. (Knowlton et al.). TEXAS - Heavy on Knox County rangeland. (Boring). MINNESOTA - Total of 310 cases of western equine encephalomyelitis in 73 counties reported. Light trap counts decreased at Minneapolis and St. Paul. Aedes vexans predominant in light trap and bite collections. Culex tarsalis decreased to 25 percent in light traps. C. tarsalis larvae moderate and A. vexans light. Recent rains likely to produce another brood. Spray program continued. (Minn. Pest Rpt.). WISCONSIN - Activity increased, annoyance severe at times in shrubby suburban lawns at Madison, Dane County. Annoyance to humans and cattle severe at some Polk County sites. (Wis. Ins. Sur.).

A BIBIONID FLY (Plecia nearctica) - ALABAMA - Occasional pair in flight in Geneva County. This is second and last generation of season. Flight increase expected in southwest counties, especially Mobile, Baldwin, and Escambia, next 30-40 days. (Reynolds et al.).

STORED PRODUCTS

AN APHID (Dysaphis foenicula) - IDAHO - Collected from stored carrots at Lewiston, Nez Perce County, by R.L. Kambitsch February 23, 1975. Determined by L.M. Russell. This is a new State record. (Gittins).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

GRASSHOPPERS - TEXAS - Moderate to heavy in Rolling Plains area. (Boring). NORTH DAKOTA - Melanoplus sanguinipes, Trachyrhachys kiowa, and M. dawsoni dominant in economically infested areas of McKenzie, Golden Valley, Slope, Billings, and Dunn Counties. (Winks). MINNESOTA - Adult survey almost completed. Light in all districts. Averaged 2 per square yard in southwest district; mainly Melanoplus femurrubrum. Ranged 6-8 per square yard in west-central district. Damage on soybeans and corn minor; mainly M. bivittatus. Averaged 5 per square yard in northwest district; mainly M. bivittatus. One per square yard in southeast and south-central districts. (Minn. Pest Rpt.).

GYPSY MOTH (Porthetria dispar) - VIRGINIA - Male moth trapped near Danieltown, Brunswick County, by B. Blythe August 12, 1975. Determined by E.L. Todd. First find for this county. (PPQ). WEST VIRGINIA - Adult males taken in 6 Jefferson County traps, 3 Berkeley County traps, and 2 Morgan County traps. (Tustin). WISCONSIN - Male moth trapped at Appleton, Outagamie County, by R. Zahringer August 18, 1975. Determined by E.L. Todd. First find for this county. (PPQ).

JAPANESE BEETLE (Popillia japonica) - GEORGIA - Trapped for first time at Zebulon, Pike County, by S. Owen July 9, 1975. Determined by E.L. Todd. First find for this county. INDIANA - Adult male trapped in Crawford County by J. Kingdom August 7, 1975, and in Ripley County by L. Godfrey August 11, 1975. Determined by E.L. Todd. First finds for these counties. (PPQ). Currently, soybean defoliation 20 percent in 5-mile area of Kosciusko and Noble Counties. Heavy on soybeans east of La Crosse, La Porte County. (Schuder, Edwards).

PINK BOLLWORM (Pectinophora gossypiella) - TEXAS - Adults increased in Pecos Valley area pheromone traps. (Bagley).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - CALIFORNIA - This vector of Dutch elm disease emerged and flying in infected areas of Sonoma County; about 500 pheromone traps in place. Eradication program underway, some infected trees at Kenwood removed and burned. (Cal. Coop. Rpt.).

WHITEFRINGED BEETLES (Graphognathus spp.) - ALABAMA - Adults, 1-2 per 3 feet of row, in peanuts surveyed in Geneva County. (Reynolds et al.).

HAWAII INSECT REPORT

General Vegetables - CARMINE SPIDER MITE (Tetranychus cinnabarinus) heavy in small planting of watermelon at Poamoho, Oahu. All stages present. Counts in excess of 20 per square inch of leaf. (Tsuda).

Fruits and Ornamentals - A TREEHOPPER (Antianthe expansa) heavy on Physalis peruviana (poha) at Kailua, Maui. Found by Tateyama on August 18, 1975. Nymphs and adults present. Determined by N. Miyahira. This is a new island record. (Miyahira, Mau). One adult each of a SPHINGID MOTH (Theretra nessus) collected at Papaikou and Kona, Hawaii Island, during late July 1975. Collectors unknown. Determined by E. Yoshioka. Moth established at east and west Hawaii Island. (Yoshioka).

Beneficial Insects - Damage by a PTEROPHORID MOTH (Oidaematophorus sp.) obvious at Volcano, Hawaii Island. At least 15 percent defoliation in July. Damage to young terminal growth moderate to heavy in August. Larvae easily found. (Matayoshi, Mau). Total of 9,045 TEPHRITID FLIES (Procecidochares alani) released on Hawaii Island during July at 2 new sites at South Kona. Found established at 2 other sites. (Matayoshi). A BRACONID WASP (Apanteles erionotae), parasite of Erionota thrax (banana skipper) found established at Hilo, Hawaii Island, during July 1975. First record of parasite from the island. No other information available. (Yoshioka). One pupa of Papilio xuthus (citrus swallowtail) parasitized by a PTEROMALID WASP (Pteromalus luzonensis) recovered at Kahului, Maui, on August 9. First released in area July 12, 1975. (Miyahira).

LIGHT TRAP COLLECTIONS

	Temperature °F.	Precipitation (inches)	Type of trap (BL - blacklight; I - incandescent; MV - mercury vapor; O - other)	Agrotis ipsilon (black cutworm)	Estigmene acrea (salt marsh caterpillar)	Ennea auxiliaris (gray cutworm)	Faronta diffusa (wheat head armyworm)	Feltia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, earworm, tomato fruitworm)	Laspeyresia pomonella (codling moth)	Loxostege commixtalis (alfalfa webworm)	Loxostege sticticalis (beet webworm)	Mamestra configurata (tomato fruitworm)	Mamestra picta (tobacco budworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Spodoptera ornithogalli (yellowstriped armyworm)	Trichoplusia ni (cabbage looper)	Crops
ARIZONA																							
Mesa 8/9-14			BL	7	2	121			46							20		331		23	11		
CALIFORNIA																							
Bellota 8/13	50-85		BL														1						
Clements 8/12	56-89		BL					3									1	2					
COLORADO																							
Denver 8/11-18			BL	3						190		40											
INDIANA (Districts)																							
Northwest 8/2-15			BL	7	44				14				1	4	13	19	91				3		
Southwest 8/2-15			BL	64	11				8					2	2	43	383				2		
KANSAS																							
Garden City 8/18			BL						5								1						
Scandia 8/19			BL	12			24		12						48		60						
KENTUCKY (Counties)																							
Caldwell 8/19-20			BL	1										5		2		3					
Fayette 8/20-22			BL	1					1					1		1				12			
MICHIGAN																							
Lenawee 8/13-18			BL	111					14						282	134	157			34	36		
Oceana 8/12-18			2BL	103					6						39	98	318			60	31		
MINNESOTA																							
Fergus Falls 8/14-20			BL												3		350						
Worthington 8/14-20			BL												75		2						
MISSISSIPPI																							
Stoneville 8/15-21	70-95	0.50	2BL	34				5	22	190				1		1	20	6	106	103	157		
NEW JERSEY																							
Seabrook 8/13-19			BL	54										11	12		292		12		11		
Vineland 8/13-19			BL	47					3					18	5		140		11		5		
NORTH DAKOTA																							
Bismarck 8/14, 18			BL									3					5						
Fargo 8/20			BL														12						

LIGHT TRAP COLLECTIONS

	Temperature °F.	Precipitation (inches)	Type of trap (BL - blacklight, I, MV - incandescent mercury vapor, O - other)	Agrotis ipsilon (dingy cutworm)	Estigmene acrea (salt marsh caterpillar)	Euxoa auxiliaris (army cutworm)	Pyrausta nubilalis (European corn borer)	Faltia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Laphygma exempta (armyworm)	Loxostege commixtalis (garden webworm)	Loxostege rantalis (beet webworm)	Loxostege sticticalis (beet webworm)	Mamestra quinquemaculata (tomato hornworm)	Mamestra renia (tobacco hornworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Spodoptera ornithogalli (yellowstriped armyworm)	Trichoplusia ni (cabbage looper)	Crops
OREGON																								
Dever 8/14-21			BL	2																				
St. Paul 8/14-21			BL														1							
PENNSYLVANIA (Districts)																								
Central 8/13-21			4BL	4	1				1								34	6	24			8		
South East 8/13-21			8BL	3	4												24	3	22			9		
SOUTH DAKOTA																								
Brookings 8/18-22			BL														267	22	129				3	
VIRGINIA																								
Blacksburg 8/15-21			BL	40					19					5	3		14	13	59		39	5		
WISCONSIN																								
Lancaster 8/12-20			BL	1					1								149	12	39		11			
Mazomanie 8/12-20			BL						2								373	1	30					

Weather of the week continued from page 718.

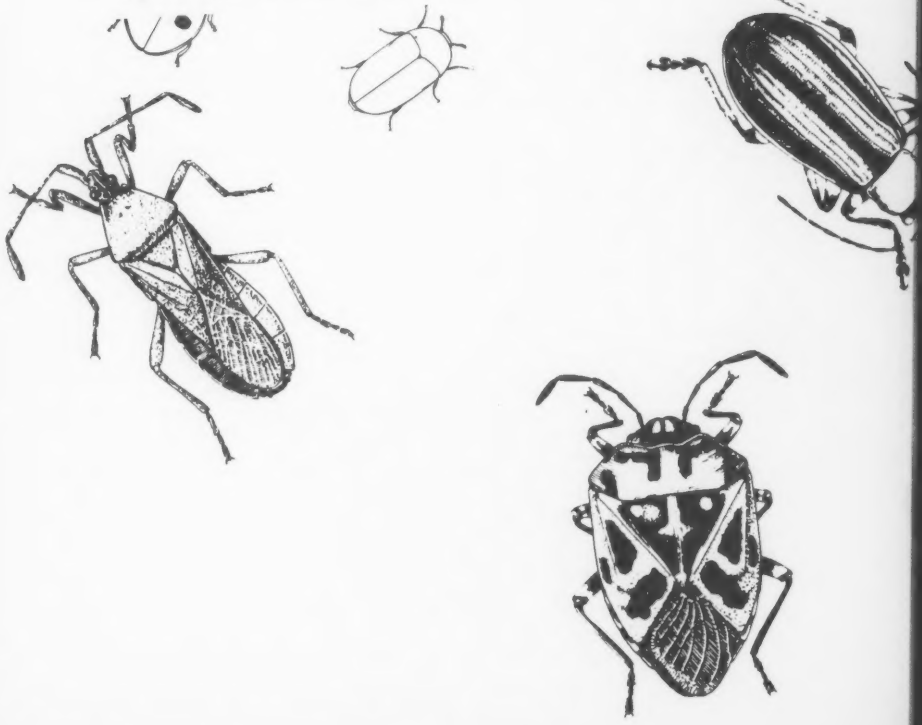
Afternoon showers over most of the Nation on Thursday. Thundershowers throughout the upper Mississippi Valley and Great Lakes region intensified, focusing mainly on Wisconsin and Michigan. In the morning, storm activity advanced in Nevada but withdrew as the day progressed. Meantime a wide band of sunshine still stretched from the central and southern Plains to the north and central Atlantic coast. Except for isolated spots, rains slackened near the end of the week. Severe weather and heavy rains settled down in the Midwest, thundershowers hushed and grew more scattered. Across the north-central and northeast United States, however, rains continued. Friday evening storms covered much of the eastern half of the Nation, mainly the Great Lakes States, Ohio Valley, and Gulf coast. Other activity dispersed throughout the northern and central Plains and lower half of the Rockies. Substantial rains fell in northern Iowa and northern Illinois. Most areas of the central Plains, however, where cropland ached for moisture, received none. Saturday's showers and thunderstorms spread throughout the southeastern third of the Nation. Rains diminished further in the Midwest but persisted in scattered areas from the upper Mississippi Valley to the Great Lakes. Heavy rains in west-central Wisconsin caused widespread flooding on roads in low areas. Showers and storms accompanied a stationary front in the Pacific Northwest and northern Rockies. Thundershowers in the Midwest weakened rapidly Sunday morning but returned in the afternoon to the Great Lakes area and upper Mississippi Valley where some severe weather erupted. In Minnesota, storms kicked up a tornado that damaged trailers and injured one person. Unseasonably cool air brought scattered showers to western Montana and northern Idaho. Nearby northern Rockies attracted much attention with the first snow of the season.

TEMPERATURE: The week began on a chilly note as cold air pushing down between the upper Great Lakes and northern Rockies kept some temperatures unseasonably cool. Monday morning turned up readings in the middle 40's and 50's in parts of the Dakotas and Minnesota. The coldest was Roseau, Minnesota--30 degrees. Later in the day a front across the Midwest pushed the mercury into the 90's in the central Plains but held it down, along the Canadian border, in the 50's and 60's. At midweek, a high pressure system cooled the Northeast where morning temperatures stayed in the 40's and 50's and in a few spots--30's. During the day, however, temperatures in many areas grew more seasonable; 90's in most of the Southwest and southern and central Plains, a few 50's in the mountains, 60's along the northern border, and 70's across a front in the Northeast. Soon hot temperatures and high humidity moved across the central part of the Nation and settled over the Plains and Mississippi Valley. Southern Iowa issued a livestock safety alert Wednesday. Sultry conditions blanketed areas from the southern Atlantic coast into the central and southern Plains where temperatures scored in the 90's. On Thursday, cool temperatures dominated the northern parts of the Nation. In the Great Lakes area, temperatures ran in the 60's in parts of Maine and along the Pacific coast--50's. Readings in the 80's and 90's were common elsewhere except in the Desert Southwest and central Plains where the mercury edged towards 100 degrees. Over the weekend, the hot, humid, southern Atlantic coast envied its northern neighbor where temperatures in the 70's and low humidity made it the place to be.

U.S. DEPARTMENT OF AGRICULTURE
HYATTSVILLE, MARYLAND 20782

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
AGRICULTURE
AGR 101

U.S.MAIL

0004 XEUNMI300A122 34037 0001
XEROX UNIV MICROFILMS SERIALS
DEPT
300 N ZEEB RD
ANN ARBOR MI 48106